

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Hiroyuki SHINBATA

Patent No.: 7,400,778

Granted: July 15, 2008

Serial No.: 10/830,169

Filed: April 22, 2004

For: DIAGNOSIS SUPPORT APPARATUS AND IMAGE PROCESSING METHOD

**REQUEST FOR CERTIFICATE
OF CORRECTION UNDER 37 C.F.R §1.322**

Certificate of Correction Branch
Commissioner for Patents
Office of Patent Publication
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 35 U.S.C. §254 and 37 C.F.R. §1.322, the Applicant respectfully requests issuance of a Certificate of Correction to correct errors in the printed document of U.S. Patent No. 7,400,778 issued July 15, 2008. A completed Form 1050 is enclosed. The errors were due to mistakes on the part of the Patent Office.

Specifically, errors are found in the recitation of claim 1 in the issued patent. In this regard, claim 1 as it appears in the issued patent at column 8 recites as follows:

1. A diagnosis support apparatus which supports diagnosis by processing an image, comprising:
 - an enhancement unit configured to enhance a circular shadow existing in an image by enhancing a pixel value gradient of the circular shadow while suppressing an overall pixel value gradient of the image; and
 - wherein the enhancement unit calculates a normalized gradient of each pixel of the image, and determines a pixel value of a predetermined pixel on the basis of a sum of inner products of normalized gradients of a plurality of surrounding pixels on a circumference at a predetermined

- distance from the predetermined pixel and unit vectors extending from the plurality of surrounding pixels to the predetermined pixel;
- an extraction unit configured to extract an isolated shadow from the image enhanced by said enhancement unit by using a disk shaped morphological filter and a ring shaped morphological filter.

However, based on a telephone interview conducted between the Examiner and the Applicant's representative on February 14, 2008 as to how claim 1 was to be amended by an Examiner's Amendment, claim 1 should have appeared, after the Examiner's Amendment, in the issued patent as follows:

1. A diagnosis support apparatus which supports diagnosis by processing an image, comprising:
 - an enhancement unit configured to enhance a circular shadow existing in an image by enhancing a pixel value gradient of the circular shadow while suppressing an overall pixel value gradient of the image, wherein the enhancement unit calculates a normalized gradient of each pixel of the image, and determines a pixel value of a predetermined pixel on the basis of a sum of inner products of normalized gradients of a plurality of surrounding pixels on a circumference at a predetermined distance from the predetermined pixel and unit vectors extending from the plurality of surrounding pixels to the predetermined pixel; and
 - an extraction unit configured to extract an isolated shadow from the image enhanced by said enhancement unit by using a disk shaped morphological filter and a ring shaped morphological filter. (emphases with underlines added)

It is noted that the above recitation of claim 1 was confirmed by the facsimile letter sent from the Applicant's representative to the Examiner on February 15, 2008 (attached hereto as Exhibit 1). In the above recitation, the underlined phrase “. . . the image, wherein . . .” was mistakenly changed to “. . . the image; and” and the underlined word “and” was mistakenly deleted in the issued patent.

Therefore, it is respectfully requested that the recitation of claim 1 in the issued patent be corrected to reflect what was discussed during the February 14, 2008 telephone interview and confirmed by the February 15, 2008 facsimile letter, as noted above, and that a Certificate of Correction be issued to the Applicant accordingly.

No fee is believed due. However, the Patent Office is authorized to charge any fees which may be required by this paper to **Deposit Account 13-4500, Order No. 1232-5388**.

Favorable and early consideration is respectfully requested.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

Dated: August 13, 2008

By:



Hiroyuki Yasuda
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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 7,400,778
APPLICATION NO.: 10/830,169
ISSUE DATE : July 15, 2008
INVENTOR(S) : Hiroyuki SHINBATA

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims:

Claim 1, column 8, line 34, change "the image; and" to --the image, wherein the enhancement . . . --; and

Claim 1, column 8, line 42, insert --and-- after ";;".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

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Patent No. 7,400,778

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Morgan & Finnegan, L.L.P.

FAX COVER SHEET

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	Examiner Woldemariam	U.S. Patent & Trademark Office	(571) 270-3247	(571) 270-4247

FROM:	Brad M. Scheller	DATE:	February 15, 2008
IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL:	(212) 415-8762	CLIENT/MATTER:	1232-5388
CONFIRM:	YES	PAGES (INCLUDING COVER):	15

RE: APPLICATION/CONTROL No. 10/830.169

Dear Examiner Woldemariam:

Further to our conversations and pursuant to your request, enclosed is the amendment to claim 1, incorporating claim 3, for your Examiner's Amendment as consented to by the Applicant in the above-identified application:

A diagnosis support apparatus which supports diagnosis by processing an image, comprising:

an enhancement unit configured to enhance a circular shadow existing in an image by enhancing a pixel value gradient of the circular shadow while suppressing an overall pixel value gradient of the image, wherein the enhancement unit calculates a normalized gradient of each pixel of the image and determines a pixel value of a predetermined pixel on the basis of a sum of inner products of normalized gradients of a plurality of surrounding pixels on a circumference at a predetermined distance from the predetermined pixel and unit vectors extending from the plurality of surrounding pixels to the predetermined pixel; and

an extraction unit configured to extract an isolated shadow from the image enhanced by said enhancement unit by using a disk shaped morphological filter and a ring shaped morphological filter.

Thank you kindly for your assistance in this matter. Please feel free to contact me with any further questions.

Best regards,

Brad M. Scheller (Reg. No. 61,022)

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 *** TX REPORT ***

Request for Certificate of Correction
 for Patent No. 7,400,778

Exhibit 1 Page 2 of 2

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